

Application No. 09/920,755

REMARKS

Claims 1-18 are pending herein.

By this Amendment, the specification has been amended to correct several typographical errors therein, and claims 1, 2 and 4 have been amended to address the rejection of the claims under 35 U.S.C. § 112, second paragraph as discussed more fully below.

No new matter is added by this Amendment. Support for the amendment to claims 1, 2 and 4 is found in the original specification, claims and Figures. In particular, support for the language added to the claims may be found at, for example, the paragraph at page 22, line 23 through page 23, line 7, in the original specification.

I. Rejection under 35 U.S.C. § 112, Second Paragraph

Claims 1, 2 and 4 were rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. Specifically, the Patent Office alleged that claims 1, 2 and 4 are indefinite because the phrase "wherein light generated in the light-emitting layer is emitted by inhibiting spontaneous emission in two dimensions" allegedly seems to imply that inhibiting emission is the mechanism for causing the emission. Further, the Patent Office stated that for the purposes of examination, the limitation of the claims will be interpreted to mean that the light is only emitted in one direction.

Claims 1, 2 and 4 are amended to remove the term "emitted" and replace this term with "controlled." Further, contrary to the assertion of the Patent Office, the phrase "wherein light generated in the light-emitting layer is controlled by inhibiting spontaneous emission in two dimensions" of claims 1, 2 and 4 does not require that light is only emitted in one direction. Rather, this limitation requires only that light generated in the light-emitting layer is controlled by inhibiting emission in two dimensions.

Applicants submit that the amended claims are clear and definite in accordance with the requirements of 35 U.S.C. § 112, second paragraph.

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For the foregoing reasons, reconsideration and withdrawal of this rejection are respectfully requested.

II. Rejection under 35 U.S.C. § 102(b)

Claims 1, 5 and 15-17 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,780,174 (Tokito). This rejection is respectfully traversed.

Claim 1 recites, in part, a light-emitting device comprising an optical element for causing light generated in the light-emitting layer to be transmitted in a predetermined direction, wherein the optical element forms an incomplete photonic band which inhibits spontaneous emission of light in one dimension or two dimensions.

The Patent Office alleged that Tokito discloses the light-emitting device of claim 1. With respect to the optical element forming an incomplete photonic band, the Patent Office refers to Figure 15 of Tokito as disclosing this limitation.

Tokito discloses a micro-optical resonator type organic electroluminescent device utilizing an organic electroluminescent material high in emission efficiency but broad in emission spectrum width. See the Abstract.

With respect to Figure 15 of Tokito, Figure 15 illustrates a radiation pattern of light emitted from an embodiment of the micro-optical resonator type organic electroluminescent device taught by Tokito. More specifically, the embodiment taught by Tokito produced a micro-optical resonator type organic electroluminescent device with a multi-layered mirror in which the uppermost layer has been replaced with a transparent conductive layer. When a voltage of 6V was applied to the device, the device emitted a vivid green light. At column 14, lines 1-8, it is described that it is evident from Figure 15 that efficient forward directivity is achieved. The fact that Figure 15 may demonstrate that efficient forward directivity is achieved in the device of Tokito does not indicate the formation of an incomplete photonic band which inhibits spontaneous emission of light in one dimension or two dimensions.

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Thus, Applicants respectfully submit that Tokito does not disclose that the optical element forms an incomplete photonic band that inhibits spontaneous emission of light in one or two dimensions, as recited in claim 1.

For the foregoing reasons, Applicants respectfully submit that Tokito fails to anticipate the subject matter of independent claim 1 or any of dependent claims 5 and 15-17. Reconsideration and withdrawal of this rejection are thus respectfully requested.

III. Rejection under 35 U.S.C. § 102(e)

Claims 2 and 12-14 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,487,231 (Boucart). This rejection is respectfully traversed.

Claim 2 recites, in part, a light-emitting device comprising a substrate and a light-emitting section, wherein the light-emitting section includes an optical element for causing light generated in the light-emitting layer to be transmitted in a predetermined direction, wherein the optical element forms an incomplete photonic band which inhibits spontaneous emission of light in one dimension or two dimensions.

The Patent Office alleged that Boucart discloses the light-emitting device of claim 2. With respect to the optical element forming an incomplete photonic band, the Patent Office referred to column 5, lines 56-57 of the specification of Boucart as disclosing this limitation, wherein it is stated, that "light is emitted in a vertical direction that is perpendicular to the planes of the layers." This cited disclosure merely indicates the direction of emitted light.

This cited disclosure does not indicate that the optical element forms an incomplete photonic band that inhibits spontaneous emission of light in one or two dimensions. Further, nowhere does Boucart disclose a light-emitting device including an optical element, wherein the optical element forms an incomplete photonic band which inhibits spontaneous emission of light in one dimension or two dimensions, as recited in claim 2.

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For the foregoing reasons, Applicants respectfully submit that Boucart fails to anticipate the subject matter of independent claim 2 or any of dependent claims 12-14. Reconsideration and withdrawal of this rejection are thus respectfully requested.

IV. Allowable Subject Matter

Applicants note with appreciation that claims 3, 6-11 and 18 would be allowable if rewritten in independent form including all the limitations of their respective base claim or any intervening claims.

V. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-18 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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